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ABSTRACT

Increasingly wide differences in abilities and experiences of entering students, changing student and institutional objectives, and changing teaching-learning techniques have led educators to reappraise the traditional credit system and to modify the strict use of class time as a quantitative measure of student progress. Three modes of deviation from formal class-hour credits are currently in use: (1) flexibility in class-hour requirements, as in independent study; (2) credit by examination, where students are able to demonstrate the required competence in certain courses in lieu of class attendance; and (3) comprehensive examinations, which require more than the accumulation of credits, in an effort to provide evaluation superior to marks in isolated courses and to encourage integration of subject matter. Because the credit system effects student outlook, institutional program planning, and the utilization of staff time and physical facilities, the cooperative development of an improved system for recording and communicating evaluations of student progress may be an important factor in improving the processes by which students become educated. (Author/LBH)

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OE-50021

NEW DIMENSIONS in Higher Education

Number 9

The Credit System

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
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Highlights

Increasingly wide differences in abilities and experiences of entering students, changing student and institutional objectives, and changing teaching-learning techniques have led educators to reappraise the traditional credit system and to modify the strict use of class time as a quantitative measure of student progress. Three modes of deviation from formal class-hour credits are currently in use:

1. Flexibility in class-hour requirements, as in the case of independent study. Although such programs have important implications for improvements in teaching-learning techniques, courses and credits usually conform to equivalent formal classwork.
2. Credit by examination, where students are able to demonstrate the required competence in certain courses in lieu of class attendance. Although this alternative suffers many of the criticisms levelled at the course credit system to which it has been made to conform, its emphasis upon accomplishment rather than upon class time as a measure of student progress has implications for transition to more forthright adjustments in the credit system.
3. Comprehensive examinations, which require more than the accumulation of credits, in an effort to provide evaluation superior to marks in isolated courses and to encourage integration of subject matter. Standards have not yet been developed for using these examinations as a basis for interinstitutional communication, and intermediate measures of progress are usually in terms of course credits.

Because the credit system affects student outlook, institutional program planning, and the utilization of staff time and physical facilities, the cooperative development of an improved system for recording and communicating evaluations of student progress may be an important factor in improving the very processes by which students become educated.

OE-50021

NEW DIMENSIONS
In Higher Education

Number 9

The Credit System
in Colleges and Universities

by
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U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
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FOREWORD

CONCERN for the highest quality of the educational product, achieved at each individual's best rate and depth, has led educators to reassess the practice of requiring the accumulation by each student of a set number and combination of class-hour credits for graduation, regardless of his entering proficiency. The adequacy of the semester hour as the primary tool for recording and reporting student progress in higher education has been questioned, and some have expressed the belief that inflexibility in class-hour requirements tends to make the accumulation of credits an end in itself and may actually be a deterrent to educational advances.

Along with brief background summaries of the historical development of the credit system, changing student characteristics, and recent reappraisals of class-hour credit, this report presents current modifications of the credit system. Special attention is given to various practices used in granting credit by examination, since this is the credit-system modification to which many institutions seem to have turned first. Practices of a number of representative institutions are outlined in the appendix to illustrate how examination credit is used to provide flexibility for students with exceptional abilities or experience. The report also gives some attention to the relationships between independent study and the credit system and to the comprehensive examination as a means of supplementing the credit system.

In the absence of conclusive research, the report neither evaluates the institutional practices used in illustrations nor recommends specific substitutes for traditional class-hour credits. It is hoped, however, that the material presented will encourage institutions to initiate further study and research on the credit system as a recording and reporting tool, to analyze its possible effects upon the quality of higher education, and to plan cooperatively whatever improvements their study and research indicate are needed.

The original manuscript was read by a number of educators, representing both higher education institutions and associations; and the comments and criticisms of these individuals have been considered in preparing the final draft.

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THE CREDIT SYSTEM IN COLLEGES AND UNIVERSITIES

Introduction

THE RAPID INCREASE in enrollement and the growing shortage of qualified teachers may be prompting changes which will mark a new era of advances in higher education. Of primary importance in charting these changes is the careful reappraisal of the system used to measure and communicate information about the progress of individuals in reaching their own educational goals and those of the society in which they live.

The credit hour as a measuring and communicating instrument was introduced originally because it was an easy method to use and to record. For students who entered institutions of higher education with similar academic backgrounds, it served primarily as a measure of the quantity of educational work taken. It is a measure of quality only when used in combination with systems of weights, like grades. The major stumbling block in revising the *quantitative* element of the credit system is the need for interchangeable measures of accomplishment by the many institutions of higher education. This problem has been magnified by the fact that students now come from highly diverse backgrounds and that institutions have widely varying standards both for admission and for graduation. Certainly, current adjustments in the credit system would benefit by cooperative institutional planning and research directed toward mutually determined objectives. Whether dissatisfaction with the quantitative element of the semester hour is strong enough to inspire development and acceptance of other measures of student accomplishment remains to be seen.

In this present period of vital concern with improving student learning and saving faculty time, a reevaluation of the credit-hour system is basic to a reexamination of course structure. It is basic also to a reexamination of teaching methods as these are related to, or affected by, new theories of learning, new measuring instruments, new materials available through modern technology, and changing student characteristics representative of all socioeconomic levels.

In our system of autonomy among institutions of higher education, changes come about slowly, often more as a result of social pressures than as a result of deliberate planning in anticipation of society's needs. The basic question is whether the class-hour credit system, despite its practical values, hampers progressive developments in curriculum and instruction. In the meantime, some may consider current modifications of the traditional credit system as little more than mere tinkering. Transitional modifications, however, may become highly stabilizing elements in the cooperative endeavors of institutions during the period of search for, and transition to, an improved measure of accomplishment, a measure which is interchangeable among the many institutions of higher education and meaningful to those who must estimate the student's ability from his college record.

Background of the Credit System

Almost everyone agrees that the composite of a student's marks in college should represent some evidence of his progress toward the goals of higher education, or at least toward his becoming an educated person. Definitions of an educated person are legion. Some of them specify areas of learning in which an educated person should be competent. Not one of them is based on a certain number of class hours or a certain number of courses or a given number of semesters in attendance at a particular type of institution. The piecemeal and kaleidoscopic measurement of that coveted goal known as a college education has developed as a result of a number of contributing factors, chiefly the ease of measuring blocks of time and the delay in developing other standardized measures of learning.

Through the years, a credit hour has come to mean a unit for expressing quantitatively the time required for satisfactory mastery of a course which includes one hour a week of lecture or class instruction for one semester, or its credit equivalent of laboratory or field work, or other types of instruction. The equivalent time required for laboratory and other work also came to be expressed in terms of clock hours. In practice, the quantitative measure came to be time, rather than content covered or competence developed. Catalog statements indicate that many institutions still deny credit to students who miss more than a specified number of these clock hours, regardless of the proficiency demonstrated.

Publications of some institutions show courses carrying as little as one semester hour of credit, although three credits per semester are typical for most courses. Most degree requirements are for 120 to 128 of these semester hours, combined in a 4-year program. Obviously, even though these credits must fit into a specified pattern of distribution, grades for isolated courses may not provide an adequate picture of the student's overall accomplishments or level of proficiency.

While many colleges require subfreshman or noncredit courses for students who do not meet desired levels of proficiency upon entering, some still do not provide advanced standing for students whose entering competence is high enough to make certain required courses so repetitious that they are a sheer waste of time. In any given institution, then, the credit system must be assessed in terms of its relative slavery to blocks of time versus its adequacy in indicating levels of competence.

A brief look at practices of the early institutions of higher education may help to show how the present credit-hour system gained acceptance. The first dozen colleges soon abandoned the teaching patterns of their English and continental counterparts, and adopted classroom recitation as the prevalent type of teaching-learning method. A tendency to standardize curricula and methods of instruction accompanied the 19th century increase in the number and types of institutions and in the percentage of the population attending college.

Questions concerning the dangers of overstandardization had already been raised at several institutions when, in 1869, Harvard introduced the elective system, which spread through most American colleges, giving students increased opportunities to determine the content of educational patterns.

In 1909, the free-elective curriculum at Harvard was reevaluated and replaced by the concentration-distribution system, in which the students were required to take courses in a given number of fields but were permitted electives within areas. In 1912, the comprehensive examination was added, to stimulate broad learning and provide an overall measure of student achievement. Most other institutions have followed the pattern of required and elective courses, although many still have not added comprehensive examinations.

During the 19th century, when the academic backgrounds of college students represented less diversity than in more recent years, the credit-hour system was considered a useful tool in the introduction of new subjects. It has also been considered useful in

weighing the equivalence of alternative courses, in the establishment of concentration and distribution requirements to provide curricular balance and flexibility, and in the facilitation of transfer from one institution to another.

The 19th century also brought a shift in educational objectives. Technological, scientific, and industrial developments were among the external forces which encouraged the expansion of higher education programs in a variety of vocational areas. For an increasing number of students, a college education was coming to be valued not only for its prestige but also as a vocational prerequisite. How one got the degree and what courses were included in it were considered less and less important by the students, and educators began to blame the credit system for permitting excesses in the flexibility it was originally designed to provide. One study notes this development as follows:

> Systems of scoring or grading were adopted which gave the student some notion of his status in a given course. To provide some kind of uniform measure of the amount of time invested in a given pursuit, the credit hour or unit was widely accepted. Once an education could be so measured, and grades assigned to the units, these became objectives in themselves. One went to college not to be exposed to ideas, not to develop one's abilities and personality, not to get an education, but to work out grades and hours and to get a degree. As the student population increased, these objectives came to accompany mass education.[1]

In the name of curriculum diversification, courses were added to such an extent that some critics have accused the institutions of proliferation. The credit-hour system itself, however, remained virtually unchanged, although each institution was free to specify course combinations required for degrees. In the absence of any national or regional control over the courses and curricula of institutions, class-hour credit became the currency for transfer. Thus, through the years, as enrollments increased and individual differences were gaining recognition, institutions were busy with the task of providing instruction and academic bookkeeping for courses accumulated in various combinations, in what has been called cafeteria style, by increasing numbers seeking the status and security promised by a college education. For a number of years, many institutions were so occupied with this mass education that there was scarcely time for reappraising the objectives of higher

[1] Robert H. Bonthius, *et al.*, *The Independent Study Program in the United States*, Columbia University Press, New York, 1957, pp. 11–12. An interesting history of the credit system is Dietrich Gerhard's "The Emergence of the Credit Systems in American Education Considered as a Problem of Social and Intellectual History," *American Association of University Professors Bulletin*, Vol. 41, No. 4, Winter 1955, pp. 647–668.

education, much less for reappraising the system used for reporting student competencies.

Nevertheless, throughout the years, the fragmentation of degree requirements in higher education received sporadic criticism and there were scattered attempts to try new approaches. With the influx of veterans following World War II, institutions began in earnest to take a new look at their curricular requirements in terms of student objectives and to reappraise the class-hour credit system as a tool for recording and reporting progress of students with a broad array of experiences and various levels of achievement and maturity. In recent years, the pressure of increasing enrollment has tended to lessen institutional competition for students and has encouraged the use of examination credit and other forms of flexibility in class-hour requirements as a means of attracting those who are most purposeful. Some teaching methods and curricular structures tested in recent experimental efforts to accommodate individual differences are treated rather fully in other publications of this series; later sections of this report review institutional efforts to provide flexibility in the class-hour credit system.

Changing Student Characteristics and the Credit System

To help understand the growing discontent with group curricular requirements which disregard the individual's background or ability, it is important at this point to see how the motives and objectives of today's college students differ from those of the student bodies at the time the credit-hour system was developed. The following findings from research on this subject by the commission on the college student have been summarized from a 1958 publication of the American Council on Education.[2]

Compared to their predecessors, the college student population today reflects wider diversification of ability and achievement. This has resulted from graduation of increasing numbers of students of varying ability from high schools with diverse requirements and curricula. The proportion of undergraduates over 21 years of age is steadily rising and there is an increasing tendency for college students to be married. Although they have more money to spend, more of them come from "working class" families or from the lower socioeconomic level. They are more representative of all racial and religious groups, and are more likely to earn part or most of their

[2] W. Max Wise, *They Come for the Best of Reasons*, American Council on Education, Washington, 1958, 66 pp.

expenses. Major fields of concentration have shifted and a larger proportion of students go on to graduate school.

The ACE publication reported also that a considerable number of able students leave college before graduation because they are required to earn class credit in courses which are simply a review of material they have already covered elsewhere. Meanwhile, as enrollments have increased, course grades and the college degree have become such a mark of status in the job market that some students have sought to reduce the problem to a series of steps which may be taken in progression, restricting themselves to areas in which there are practical possibilities of success in amassing credits and marks which may do more to aid them in entering a vocation than in progressing in it.

Although many colleges and universities may be aware of and concerned about these changes in student characteristics, the tendency of most institutions has been to offer program diversification by adding courses as these are judged to be needed, retaining basic course requirements, and measuring progress by the accumulation of class-credit hours, with adjustments for laboratory and other activities.

Yet it must be admitted that, with increasingly adequate libraries, films, closed circuit television, and other devices, the amount of time spent in class is not in any sense an adequate measure of student achievement, even though some initial differences may be minimized by homogeneous grouping. Perhaps, with financial backing from foundations to cover the costs of research, a growing number of institutions will take a new look at the credit-hour system as a tool for recording and reporting student accomplishment. The following recent statements by educators show a need for action but do little to suggest the direction this action should take.

Reappraising the Credit System

A 1959 report based on the results of a number of research projects sponsored and financed by the Fund for the Advancement of Education, states that:

> One great difficulty with the traditional patterns of education is that they are presented to students in fairly rigid "units" which may be administratively convenient but which are educationally inefficient and actually hamper the student in making the most effective use of his time and that of his instructors for his learning. In most colleges and universities, we have acted on the assumption that there is not effective learning unless a professor offers a course "packaged" in quarter or semester units of a given number of hours a week and the student is exposed to direct instruction in

the required number of hours. Content must be padded or trimmed down to fit neatly into the credit unit prescribed for a course and, generally speaking, innovations which would disturb the complex schedule of classes are discouraged.[3]

Of the experiments supported by grants from the Fund, under the program of better utilization of college teaching resources, the Evaluation Committee was inclined to question whether the experiments were as bold as the staff crisis would seem to demand. It was their opinion that:

> Instead of trying to find out how students can be put through the same paces more efficiently, college staffs probably ought to be questioning vigorously their whole course and credit structure. No one knows the amount of wasted effort represented by giving students experiences they don't need or ones from which they cannot individually profit. Wiser selection at this point may offer the greatest possibility for saving faculty time, but few staffs seem to have the necessary courage and stamina to do anything about it.[4]

In the previously cited report of the Commission on the College Student, the problem is stated succinctly as follows:

> If the degree is to indicate a level of accomplishment and to be in part a reward for excellence, the college must either seek a new basis for its award or make important distinctions among the degrees to be earned by 4 years of study. In addition, the social factors which formerly encouraged colleges to maintain a set span of time that would allow students to mature are much less cogent in a period and society in which students enter college at widely varying levels of maturity and in which maturity is promoted by so many institutions other than the college. To equate education and time is to denigrate the value of both, particularly the former; it is to declare that the educated man is one who has spent 4 years or 8 semesters at an institution of higher learning, which is an indefensible thesis. Not that many, indeed any, would defend it: but it is the *reductio ad absurdum* of the proposition that the 4-year baccalaureate program is sacred.[5]

The president of the University of Pennsylvania indicated substantial agreement in his 1959 report, *Assaying a University*, when he stated that a survey at his institution suggested that

> . . . the academic bookkeeping of semester credits and examinations for the establishment of student standing should be revised or even abolished, thereby destroying the fiction that education and learning are identical with grades and credit.[6]

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[3] *Better Utilization of College Teaching Resources*, A Summary Report. The Fund for the Advancement of Education, New York 22, 1959, p. 12.

[4] *Ibid.*, p. 56.

[5] W. Max Wise, *op. cit.*, p. 45. That this dissatisfaction with class attendance as a basis of measurement in education is nothing new is indicated also by Norman Foerster, *The American State University, Its Relation to Democracy*, University of North Carolina Press, Chapel Hill, N. C., 1937, p. 97; and A. L. Lowell, *At War With Academic Traditions in America*, Harvard University Press, Cambridge, Mass., 1934, p. 275, where a 1917 address by Dr. Lowell condemns the kind of units used to measure education.

[6] University of Pennsylvania, *Assaying a University, Report of the President, 1959*, University of Pennsylvania Bulletin, Volume LX, Number 3, October 1959, p. 13.

At the annual National Conference on Higher Education in 1956, Harold Taylor, former president of Sarah Lawrence College, pointed out that, even if we faced no teacher shortage during the current period of increasing enrollment, "we would have exactly the same need for scrapping our present system of instruction and inventing a new one. . . . What we have now is a huge mechanical system for disseminating information."[7]

At the National Conference the following year, John G. Darley censured our reliance on classroom boundaries and traditional credit requirements. He suggested that the pressure of additional enrollment might result in a reorganization of the curriculum, improved use of new technology for instruction and evaluation, and new insights into the power of man for self-education and self-direction.[8]

More recently, at a regional workshop on higher education, Alvin C. Eurich denounced the standard or generally accepted definition of a college education in terms of an accumulation of approximately 120 semester hours of credit in 4 years of attendance at an "accredited" college. Eurich pointed out that, although students are generally admitted to graduate school on the basis of degrees completed at "accredited" institutions,

> . . . we often find graduate students at a university who are unable to pass the examinations required of freshmen for entrance to that same institution. Is there not a need, therefore, to reconsider the real meaning of this academic bookkeeping and to inquire about the relationship of 120 semester hours to an education?[9]

Eurich's recommendation for a solution to this dilemma reads:

> In the first place, perhaps colleges and universities could cooperatively establish some minimum standards for graduation, based on actual student achievement rather than on accumulation of credits. If admission examinations are important at entrance, is it not equally pressing that colleges be more exact in determining the student's standing upon leaving? How this would be done is a matter for deliberation and study. Various types of comprehensive examinations might be used, including the oral. Outside examiners might be called in as they have been at some institutions. Papers might be written with clearly defined criteria for evaluation.

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[7] Harold Taylor, "The World of the American Student," *Current Issues in Higher Education*, National Education Association, Washington, 1956, p. 22.

[8] John G. Darley, "What Modifications of the Present Structure Within Institutions of Higher Education Will Be Necessary or Desirable?" *Current Issues in Higher Education*, National Education Association, Washington, 1957, pp. 151-155.

[9] Alvin C. Eurich, "Shibboleths in Higher Education," *Quality and Opportunity in Higher Education*, Western Interstate Commission for Higher Education, Boulder, Colo., 1959, p. 12.

I am in no sense advocating national examinations. Nor am I minimizing the importance of diversity, either in institutions or in the accomplishments of individuals. The procedures can be adapted to both. All that I am suggesting is that we be more precise in defining what we expect students with different capacities and goals to accomplish, and that we cooperatively develop procedures for determining whether or not they have done so.[10]

Accrediting agencies, too, have given consideration to the need for reform in course and credit structure. Representatives at an invitational conference sponsored by the National Commission on Accrediting during the summer of 1959 recommended greater consideration of the results of judicious student testing as one means of assessing teaching effectiveness and outcomes of programs of instruction. This group suggested that accrediting agencies should sponsor collection of comparative data by a single national agency, such as the Office of Statistical Information and Research of the American Council on Education. They noted that, if scores for the widely used tests were converted to a common scale, accrediting teams could arrive at better judgments concerning the level of student performance, and institutions would be provided with data on which to base their self-evaluations.[11]

In an October 1959 conference of representatives of accrediting agencies, it was agreed that the National Commission on Accrediting should assume leadership in pressing for appropriate definitions of levels of educational excellence, in developing better provision for measurements and evaluations of quality, and in encouraging studies leading to more adequate systems of reporting to the public.[12]

In an address to the 1960 annual meeting of the Association of American Colleges, Louis T. Benezet, President of Colorado College, asked, "What sanction, after all, established 120 semester hours? How do we know how many courses a student needs to become educated?" He called attention to John H. Finley's reference to the dean's office as "A marketplace for the exchange of those negotiable elective tokens by which one through skillful barter might come to his degree and yet be a versatile ignoramus."[13]

Benezet describes the failure of college staffs to study reports of experimentation tried by other institutions and to use this information as a basis for planning their own improvements. For

[10] *Ibid.*, pp. 13-14.

[11] *Accrediting of Colleges and Universities in the Coming Decade*, Report of Conference Sponsored by the National Commission on Accrediting, June 29-July 1, 1959 (Dewey B. Stuit, *ed.*), National Commission on Accrediting, Washington 6, 30 pp.

[12] Report of Conference on Accreditation, October 6-7, 1959 (William K. Selden, *ed.*), National Commission on Accrediting, Washington 6, 16 pp.

[13] Louis T. Benezet, "Once More unto the Breach," address to the annual meeting of the Association of American Colleges, Boston, Mass., January 12, 1960 (mimeographed), 16 pp.

example, he points out that some may have forgotten the Eight-Year Study[14] just before World War II which found that success in college does not depend upon the study of strictly conventional courses in high school and asks whether college course and credit patterns might be equally ineffectual in predicting success after college or in graduate school.

In spite of growing criticisms of the credit-hour system, however, a review of current trends indicates that most institutions have found it easier, for the time being, to adapt their programs *within* the traditional class-hour credit system than to try to blaze new trails in evaluating, recording, and reporting student progress. Whether a complete change in the credit system is inevitable, only time will tell; but there are indications that changes are taking place.

Current Trends in the Credit System

In general, there seem to be three current modes of deviation from class-hour credits: (1) flexibility in class-hour requirements, as in the case of independent study; (2) examinations in lieu of class attendance where students are able to demonstrate the required levels of competence in certain courses; and (3) comprehensive examinations, which require more than accumulated credits in an effort to reduce the effect of isolation of courses and to encourage integration of programs and subject matter. Still another method of deviation from class-hour credits is found in programs individually tailored for students, such as those offered at Sarah Lawrence and a few other institutions.

It should be remembered that the credit system performs a service function in the educational process and that modifications in its use are generated in response to the need for improved communication as educational philosophies and practices change. For that reason, deviations from class-hour emphases have come about piecemeal as trends have developed. For example, in the present educational effort to teach more things better to more people with maximum economy of time and facilities, institutions have been led to adjust their use of credits to emphasize accomplishments and abilities rather than the amount of time spent in classes. It is important, therefore, to consider the influences of current trends on the credit system.

[14] Wilford M. Aikin, *The Story of the Eight-Year Study*, first of 5 volumes in Adventure in American Education Series on the Eight-Year Study, Harper & Brothers, New York, 1942, 157 pp.; and other volumes.

Other publications in the New Dimensions in Higher Education series have dealt with the growth of programs of independent study and advanced standing.[15] These developments are treated briefly here, with special emphasis upon their relationships to the credit system. The practice of granting credit by examination is treated in somewhat more detail; this, however, is not intended as a tacit recommendation of examination credit as the only or best substitute for the class-hour credit system. Comprehensive examinations, which some institutions have superimposed upon traditional credit systems in an effort to strengthen their total programs, are also treated.

Independent Study Programs

Independent study is not a new concept. Deliberately planned programs were established in American colleges and universities during the latter part of the 19th century. Some required all students to do independent study in certain areas; others permitted superior students to do independent study in honors courses. Experiences with this type of teaching-learning technique were reported in considerable detail in 1957 by Bonthius and others and, since April of 1958, have been reported in *The Superior Student*, which is published monthly by the Inter-University Committee on the Superior Student.[16]

The Bonthius report differentiates the development of honors courses and other independent study programs as follows:

> When the "honors courses" begin to spread after 1920, it soon became apparent that the term "honors" implied a reward or objective rather than a method of instruction. . . . Princeton University gradually began the use of the term "independent study" for its four-course plan which began in 1923. In 1925 Stanford University used the same term to describe its program. There were several suggestions at the Honors Course Conference at the State University of Iowa, sponsored by the National Research Council in 1925, that the term "honors course" was not an accurate description, and that "independent study" was a better term.[17]

Edward B. Stanford, in 1942, further clarified the distinction between independent study programs which are designed for all students and honors programs which limit independent study to

[15] See Winslow R. Hatch and Ann Bennett, *Independent Study*, New Dimensions in Higher Education, Number 1; and Shirley A. Radcliffe, *Advanced Standing*, Number 8 of the series. Independent study is treated also in descriptions of experimental programs in other parts of the series.

[16] Bonthius *et al.*, *op. cit.*, 259 pp.; *The Superior Student*, J. W. Cohen, *ed.*, published monthly during the academic year by the University Honors Information Service of the Inter-University Committee on the Superior Student, University of Colorado, Boulder, Colo.

[17] Bonthius *et al.*, *op. cit.*, p. 6.

superior students, but specific provisions listed in the 1960–61 "Honors Inventory" of *The Superior Student* indicate that there is still confusion in the use of terminology.[18] Stanford defined independent study as an educational program in which the emphasis of college work would be shifted from the mere massing of points, credits, and hours of class attendance to goals defined in terms of individual student growth, achievement, and comprehension in a particular field of knowledge.

The Bonthius report explains that, in organized programs, independent study differs from work in which credit is received for nonsupervised reading because the faculty member keeps in closer touch with the work of the student, serving both as counselor and guide. It differs from tutoring in that the student has more freedom and choice as to the area and nature of his work. In general, however, the term independent study has been used in a broad sense to include all types of programs which do not require the student to conform to the rate, depth, or scope of study of a particular class group.

The earliest deliberately planned programs of independent study were relatively few in number, but reports on their experiences sparked interest in this type of teaching-learning technique. In a discussion of changes in traditional methods of collegiate instruction, John H. McNeely in 1935 described independent study as a "trend toward wider acceptance of the philosophy of individual instruction in higher education, many going so far as to abolish semester credits, required class attendance, and teaching by textbooks."[19] In 1944 the Swathmore program received considerable attention through the publication, *Breaking the Academic Lock-Step*, by Frank Aydelotte,[20] who has been called a perceptive pioneer of such programs.

According to the 1957 report by Bonthius and associates, approximately a fourth of the 4–year undergraduate colleges in the United States had institutionwide provision for *some* type of required or voluntary program of independent study. Although there seems to be an increase in required programs in recent years, the study showed that only about 13 percent of the plans were reported as

[18] Edward B. Stanford, "Honors Work and the College Library: A Consideration of the Library Implications of Independent Study Programs," *The Library Quarterly*, XII (April 1942), p. 22. Of the institutions listed in the "Honors Inventory" issue of *The Superior Student*, Jan. 1961, approximately half or more indicated specific provisions for one or more of the following: independent study, senior thesis or research project, advanced placement, comprehensive examinations, requirements waived, credit by examination.

[19] John H. McNeely, "Changes in Traditional Methods of Collegiate Instruction," *School and Society*, XLI (Feb. 16, 1935), pp. 213–217.

[20] Frank Aydelotte, *Breaking the Academic Lock-Step*, Harper and Brothers, New York, 1944, 183 pp.

"required" and that most of these were required only of certain groups of students.[21]

The rapid spread of these programs in recent years is indicated by the 1960–61 "Honors Inventory," which is a progress report and not an exhaustive survey. It lists 196 institutions with definite operating programs and 43 with proposed programs. More than half of the operating programs were inaugurated since 1958.[22]

Many advocates of independent study support it as a general requirement for all students at some time during their college careers. They see it as a method of teaching and learning which best enables every student to work in accord with his abilities and potential and to be responsible for his own learning and self-direction. In spite of the recent growth of such programs, the proportion of students taking independent study work has remained small, and credit has usually been expressed in terms of the semester or quarter hours considered necessary for an equivalent amount of formal class work. The influence of independent study upon the credit system will no doubt be related to the spread of this type of instruction in all areas rather than to the growth of formal programs of independent study.

In the past, the forced conformity of independent study to formal class-credit patterns, thereby limiting the depth and breadth of independent study areas, may have been a major hindrance not only to the spread of the teaching-learning techniques which independent study is designed to foster but also to the development of other measures of accomplishment appropriate to independent study. With mounting social pressures for better ways to develop the talents of academically able students, with the current increase in enrollments and emphasis upon degrees of accomplishment rather than upon course credits, independent study may well be the catalyst to stimulate general confidence in and development of measures of student progress not based strictly on time spent in class.

Advanced Standing Programs

Advanced standing programs also contribute to flexibility in the credit system. The most widely used of these is the Advanced Placement Program administered by the College Entrance Examination Board, whereby students receive advanced standing in col-

[21] Bonthius *et al.*, *op. cit.*, p. 211.

[22] "Honors Inventory, 1960-61, Programs and Provisions in Four-Year Colleges and Universities," *The Superior Student*, *op. cit.*, Jan. 1961, provides detailed information about current programs and enrollments.

lege on the basis of college level work which they have completed in high school. Also designated as advanced standing programs are the various plans which enable superior high school students to take college courses concurrently with their high school courses.

Advanced standing programs are designed to avoid repetition or duplication in high school and college work and thereby provide for acceleration of able students. More than 400 colleges and universities now accept the principles of the Advanced Placement Program, and the number of higher institutions sponsoring other forms of advanced standing to accommodate local conditions is growing. However, both the Advanced Placement Program and other advanced standing programs are based upon the completion of classroom courses of study, either in high school or in college. Their break with the present credit system, therefore, has been primarily in giving recognition to levels of competence and allowing credit for work completed before admission to college. However, research on these programs[23] may be an important factor in building confidence in acceleration and in the use of examinations as measures for reporting student progress.

Credit by Examination

Except in a few experimental institutions, credit by examination is used chiefly as a modification of, not a substitute for, the class-hour credit system; credits are usually recorded in terms of equivalent course work covered in regular classes. Institutions have found it an easily administered method of permitting able students to accelerate their work and receive credit for demonstrated competence without upsetting the traditional course structure and with a minimum of change in instructional practices.

In its broadest sense, credit by examination recognizes student competence without regard to where, or when, the learning takes place. In some cases, it is a means of granting credit for the student's unsupervised independent study or experiences; in other cases, it is a means of validating credit for course work at other institutions. There are obviously interrelationships between credit by examination and independent study, whether such study is in organized institutional programs or on the student's own initiative.

Over the years, by far the largest number of programs of independent study and credit by examination have given credit which

[23] For example, see Mariam Faries and James Perry, "Academic Acceleration and the College Student," *The Personnel and Guidance Journal*, March 1960, pp. 563-566.

counts toward graduation,[24] although some institutions give only exemption credit. The general practice in most institutions has been to give academic credit equivalent to that granted for a particular number of class meetings. Usually this has involved little change in the familiar credit-hour system.

Experiences with veterans following World War II brought about expansion of programs of credit by examination. Before that time, except in a relatively few institutions, examinaitons not based on class attendance had been used largely to measure proficiency in skill subjects, in languages, and in mathematics. Numerous studies by institutions cooperating with the Commission on Accreditation of Service Experiences of the American Council on Education have indicated that competence on the USAFI Tests of General Educational Development, College Level, could be substituted by veterans for completion of certain required courses.[25] Since the so-called veterans' bulge in enrollment, the granting of credit by examination has spread to nonveteran students and the areas of examination credit have been enlarged to include virtually any subject in which an institution finds that a student's competence would clearly permit him to advance beyond the initial course.

One of the most comprehensive studies on the practice of granting credit by examination covers 4-year colleges and universities in the North Central Association and indicates the wide variation in the policies among institutions and, indeed, even among departments within institutions. This questionnaire study by Harding College in 1959[26] revealed that 171 of the 300 responding institutions of the North Central region grant college credit by examination. In 105 of these, all departments can or do participate in the program; in 45, the practice is limited to particular areas or departments. In order of frequency, the departments most often mentioned as using credit examinations were languages, mathematics, English, chemistry, biology, music, business and secretarial practice, and speech. Nineteen institutions indicated that the opportun-

[24] Robert H. Bolthius, *et al.*, *op. cit.*, pp. 18 ff.

[25] For example, Joseph C. Bledsoe, "An Analytical Study of the Academic Performance of a Group of Students Accelerated on the Basis of College Level GED Test Scores," *College and University*, Vol. 29, April 1954, pp. 430–438, cites 8 studies on this subject. *A Guide to the Evaluation of Educational Experiences in the Armed Services*, American Council on Education, 1785 Massachusetts Avenue, N. W., Washington 6, 1954 Revision, 426 pp., is the standard guide used by institutions and organizations in evaluating experiences of armed service personnel.

[26] "An Analysis of Practices of Granting College Course Credit by Examinations in North Central Colleges and Universities," Harding College, Searcy, Ark. (covering letter dated September 25, 1959), mimeographed, 19 pp. Also, James A. Hedrick, "College Credit by Examination," *Journal of Higher Education*, April 1960, The Ohio State University Press, Columbus 10, Ohio, pp. 212–215.

ity to earn examination credit is open to all students; 65 indicated restrictions to those students who have demonstrated unusual achievement or whose training and experience outside the classroom give promise of creditable performance. Some institutions give credit only for knowledge revealed on the College Entrance Examination Board's Advanced Placement tests covering work taken in high school.

The study found that a majority of the institutions permit the student to take the examinations throughout the 4-year program. Some colleges require that the student be in residence for a specified minimum period of time; some limit the time during which credit examinations may be taken to the first 1 or 2 years of college. Safeguards for ensuring a high quality of performance are provided by careful screening of examinees and by the difficulty of the examinations.

Reasons most frequently mentioned for adopting the program of credit by examination include aid to the able, highly motivated student; recognition of skills and educational experiences obtained outside the classroom; recognition of unaccredited educational experiences; and avoidance of repetition in course work. Grades for examination credit were assigned on the same basis as for course work in 91 of the institutions; 60 institutions used other devices in lieu of grades to record credit earned by examination.

In this study of North Central colleges and universities, an analysis of the maximum number of credits which could be earned by examination showed 15 semester hours typical of most institutions. Eight schools reported a formal limit of 30 semester hours. Although 66 institutions placed no limit on examination credit, it was reported that students rarely earned more than 15 hours because of the difficulty of the examinations.

The same study reported that those institutions participating in the CEEB's Advanced Placement Program generally grant credit on the basis of scores on the College Entrance Examination Board's standardized examinations in areas for which these are available, but 96 institutions reporting that some examinations are prepared by course instructors, sometimes subject to approval by special committees to ensure maintenance of adequately high standards. Actual grading of these locally constructed examinations is largely left up to the instructor, although some institutions require additional approval by departmental committees before granting credit.

The study showed the essay examination to be the type most frequently used, but 38 institutions reported the use of combinations of several kinds of tests and some institutions reported that the

type of test varied according to the type of proficiency to be measured. Apparently, there was general agreement that credit examinations, regardless of their form, should be exhaustive and intensive, of greater difficulty than examinations in regular courses.

Reports from this and other studies of the procedures in various colleges and universities granting credit by examination show the following characteristics of a successful policy:

1. Proper recognition and support should be given the program by members of the faculty and administration. At the same time, only those students with a reasonable expectation of doing well on the examinations should be encouraged to take them. Because success in independent study depends greatly upon such intangibles as drive, enthusiasm, and motivation, the role of the counselor and the instructor is very important.

2. Every effort should be made to obtain or construct examinations which will ensure a high quality of performance. There should be continuous evaluation and revision of the tests to guarantee depth and comprehensiveness.

3. The success of a program of credit by examination is dependent to some extent upon the enthusiasm of the faculty, one measure of which is the number participating in the development of a sound program. To ensure a dynamic policy, a standing committee composed of members of the faculty and the administration should review the program periodically.[27]

In summing up the general influences of examination credit practices, a number of points are worth noting. Whereas institutions formerly handled examination credit on the basis of individual students, many now have formulated definite policies regarding the granting of such credit to any student who is able to demonstrate the required level of proficiency. However, it is difficult to isolate any one particular pattern among the institutions, and there has been no concerted effort to develop common practices for transfer of credits among institutions. Wherever policies are stated, they seem to have been locally developed in accordance with the institution's own philosophy and to meet the institution's own standards for regular classwork.

Although ability to pass credit examinations may be the result of a combination of the student's home environment, independent study, experiences, college level work taken in high school, or even a matter of academic aptitude, the simple practice of granting credit by examination has in most cases had little effect upon the traditional curriculum structure and does not necessarily result in any great change in the type of instruction used for regular classwork. Under the present enrollment pressure, its chief value thus

[27] James A. Hedrick, "College Credit by Examination," *op. cit.*, pp. 214–215.

far lies in exemption of students from courses involving knowledge they have previously acquired elsewhere, thereby relieving teachers for other students and possibly forestalling lazy study habits. It also may shorten the time required for completion of the undergraduate degree, thereby permitting earlier enrollment in graduate school or earlier entrance on careers.

On the other hand, the practice of granting official credit by examination does mark a recognition of the fact that some learning can and does take place outside the classroom and that a program of unified courses for all students may therefore not be appropriate. Consequently, examination credit has been useful in providing better integration of the student's learning with his pre- and extra-college experience and in providing flexibility in meeting curricular requirements.

Already, the use of credit by examination marks a change in the direction of increased emphasis upon student accomplishment and declining stress upon class time as a measure of student progress. Research indicates that students earning credit by examination do as well in subsequent courses as those who took the earlier work in the classroom.[28] Recent progress in the development of tests to measure student growth in areas other than content, such as creativity, objectiveness, critical thinking, attitudes, and values,[29] suggest that there is progress in the whole field of educational evaluation. Actually, since each institution determines its own standards for graduation, the shifting of emphasis from class-hour credit to a system of measures based on student growth and accomplishment would not be wholly inconsistent with the philosophy of some institutions that the atmosphere of 4 years of residence study has a profound influence upon student development.

In the years ahead, it is quite possible that institutional experience with credit by examination may become the basis for forthright action in revolutionizing all of higher education. As measuring instruments and techniques are improved and as new educational media gain wider recognition, experience with credit by examination may affect not only the system by which student progress is recorded and reported but methods of instruction as well.

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[28] *The Student and His Knowledge*, by William S. Learned and Ben D. Wood, The Carnegie Foundation for the Advancement of Teaching, New York, 1938, 406 pp., is still one of the most significant research reports on examinations and student learning progress. Certainly, along with more recent research, it should be reviewed by those who, more than 20 years later, are concerned with many of the same problems.

[29] See, for example, Mervin B. Freedman, *Impact of College*, Number 4 of the series on New Dimensions in Higher Education.

This does not suggest a retreat to the European system which is designed to train an elite and which often lacks relevance for mass education because it offers a highly traditional curriculum to the few who can qualify by examination. What it does mean is that, in our efforts to educate every individual to the highest level of his abilities, examination credit may become a major factor in the development of standards which can be used to communicate the extent of individual progress in programs which start where the student is and try to relate his education to his needs and aspirations and to the demands of society.

The experiences with examinations at the University of Buffalo and those at the University of Chicago have been widely reported. These and other examples given in the appendix indicate some of the variations in stated policies of institutions, ranging all the way from simple substitution of examination credit for required course work in the traditional credit system to the use of examinations as the primary measuring instruments, with intermediate measures of competence used only as advisory reports.

Comprehensive and Similar Examinations

It has been noted that some institutions, recognizing the inadequacy of class credit in individual courses as a measure of overall student achievement, have added comprehensive or field examinations. The term "comprehensive examination" has been used to refer to an examination designed to measure overall proficiency or competence rather than proficiency in a single course. Some institutions use comprehensive or field examinations to assess the level of competence in particular areas of study; others use them to assess the overall level of competence in combinations of areas or in total programs.

In a 1955 study by Paul L. Dressel, Director of Institutional Research, Michigan State University,[30] 301 or 65 percent of the 466 liberal arts colleges responding to his inquiry reported the practice of using comprehensive examinations. Of these, 232 reported that comprehensive testing was carried on in all departments, 236 reported the use of written tests, and 196 reported the use of locally constructed tests.

[30] Paul L. Dressel, "The Present State of Comprehensive Examinations in Liberal Arts Colleges of the U. S. A.," 1955, as reported in "An Appraisal of Comprehensive Examinations in Liberal Arts Colleges and Universities," a report of the New Ideas Subcommittee of the Committee on Educational Policy, DePauw University, Greencastle, Ind., Feb. 10, 1960 (mimeographed), 6 pp. See also Edward S. Jones, *Comprehensive Examinations in American Colleges*, An Investigation for the Association of American Colleges, The Macmillan Company, New York, 1933, 436 pp., for information about an earlier period.

A 1960 report of a study directed to 101 liberal arts colleges by DePauw University tended to confirm the findings by Dressel and noted that:

> Outside examiners have not proved satisfactory in a majority of cases. Locally constructed and locally administered examinations in which departments have a major controlling hand have been successfully administered at some selected schools for over thirty years. Without fail, the schools in this group are the ones that report the most favorable attitude toward the examinations among both faculty and students.[31]

The study warned, however, that unless comprehensive examinations are continuously revised to conform with new learning and changing objectives they may become just another fixture in the evaluation process.

A review of current educational literature indicates that institutions which use comprehensive examinations are generally agreed that they have an important place not only in motivating students to integrate their learning but also in providing a measure of overall proficiency. However, in most cases, students are admitted to these examinations only after completion of a stipulated number of course credits in the areas involved or near the close of the total program. Thus, the influence of these examinations on the credit system has been limited by the fact that, as currently used, they measure the end product rather than the stages of progress. For this reason, they must be supplemented with intermediate measures which can be used as a basis for communication with students and others in need of evaluative information before the student finishes his program. Whether widely acceptable intermediate measures more adequate than course credits will be developed remains to be seen.

Only in a few institutions may comprehensive examinations be taken in lieu of classes in certain areas to meet graduation requirements. In general, these examinations are difficult to interpret outside the administering institution. The lack of commonly accepted measuring standards has been a limiting factor not only in research on the relationships between examination scores and student marks, but also in the use of examination results as a basis for interinstitutional communication.

Closely akin to the idea of comprehensive examinations in undergraduate colleges and universities are the licensing tests required by various professions, the examinations used in 22 states in con-

[31] DePauw University, "An Appraisal of Comprehensive Examinations in Liberal Arts Colleges and Universities," *op. cit.* (30 *supra*), p. 4.

nection with teacher certification,[32] and the Graduate Record and other admissions tests used by graduate schools.

The number of graduate schools requiring examinations for admission is steadily increasing. Some institutions accept creditable performance on graduate admissions examinations in lieu of graduation, a practice similar to the early admission programs used by some undergraduate schools. Most graduate schools use admissions examinations to determine the general competence of students or to screen out those inadequately prepared. These practics in themselves suggest that graduate schools consider admissions examinations superior to the traditional credit-hour systems in measuring undergraduate achievement and communicating information about it even from one level of education to another.

Clearly, the increasing tendency of graduate schools to measure the competence of entering students is related to, and possibly an outgrowth of, the increasing discontent with an evaluation system based on accumulation of separate intermediate measures in the form of credits for class attendance. As long as undergraduate colleges and universities fail to develop ways to measure and report accurately the levels of student accomplishment, other agencies or organizations will impose their own measures of competence at the thresholds of graduate study or career.

Summary

It should be granted that the measurement of education is intrinsically difficult; nothing can make it simple. Through the years, institutions seem to have been so busy with adjusting course offerings to meet the changing needs of generations of students and the shifting conceptions of what constitutes an educated person that they have had little time, or inclination, to revise the system used to measure accomplishment or to develop new recording and reporting tools. Philosophies and practices with regard to class attendance and credits vary not only among institutions but among the departments within institutions and even among the teachers in individual departments. Perhaps no credit system is actually an effective measure of an educated person, but institutions are expected to use the best possible means of recording and communicating the information they have.

[32] Eugene E. Slaughter, "Current Use of Examinations for Teacher Certification," paper presented at the 1959 annual meeting of the Council on Cooperation in Teacher Education, Washington, Oct. 22, 1959 (mimeographed), 8 pp. See also *The Newsletter* of the Council on Cooperation in Teacher Education, Volume XIII, Number 3, July 1959, which was devoted to discussion of the pros and cons of proficiency examinations for teachers.

Not only do some educators consider the credit hour an instrument of doubtful validity as a measure of accomplishment of students who come from highly diverse academic backgrounds; they consider its strictly class-hour interpretation an actual impediment to improvements in teaching-learning patterns. For example, the forced conformity of independent study programs to the class-hour credit pattern may actually have the debilitating effect of limiting the depth and breadth of independent study areas, thereby discouraging the spread of the teaching-learning techniques which independent study is designed to foster and obscuring the need for development of measures of progress not based on class time.

On the other hand, credit by examination, as a modification of the traditional class-hour system, provides a form of flexibility for able students by permitting substitution of examination-credit for class credit, but it does this without necessitating—or encouraging—major changes in curriculum patterns or teaching methods. Although the practice of granting credit by examination does permit able students to avoid the needless repetition of class work on which they are able to demonstrate competence, examination credit suffers many of the criticisms levelled at the course credit to which it has been made to conform.

Nevertheless, credit by examination does mark a change in the direction of increased emphasis upon student accomplishment and declining stress upon class time as a measure of student progress. As currently used in many institutions, examination credit may be only a temporary measure during a transitional period as educators seek a firm basis on which to build major changes in the credit system.

Comprehensive examinations have been credited with motivating students to integrate their learning across subject areas and with providing a better measure of overall student accomplishment than is available from a composite of student marks in isolated courses. However, as currently used, these examinations must be supplemented by intermediate measures of progress, and there has not yet been enough research and coordinated effort among institutions to develop standards for using them as a basis for general inter-institutional communication.

It must be admitted that many of the abuses inherent in the traditional semester-hour measure of progress are possible in any type of credit system, and that the mere use of credit hours does not necessarily mean rigid conformity to group curricular requirements. On the other hand, a credit system based on comprehensive or field examinations does not, by itself, guarantee programs

geared to individual rates of progress or coordinated to cover related areas of concentration. Even in institutions with the traditional course and credit structure, the good teacher may so combine independent study, lectures, and other teaching-learning techniques that students make the desired progress. The point is that the traditional class-hour credit system permits abuses by poor teachers and vacillating students through piecemeal accumulation of credits and imbalance between course objectives and student progress. Also, exclusive reliance on the class-hour credit system may lead to needless repetition of study already mastered by students with superior training or broad experiences.

Institutions which have had longest experience with credit based primarily on competence rather than on blocks of time recommend the use of some combination of comprehensive or field examinations, advanced standing, and credit by examination to encourage more efficient teaching-learning techniques and develop better learning habits and more purposeful objectives by both students and teachers. This does not mean the abandonment of reports of the quality and quantity of the student's progress toward the completion of his program; what it does mean is that individual courses are treated as stepping-stones in the larger program and not as ends in themselves and that the quantitative elements of student marks indicate levels of competence rather than time spent in class.

Hundreds of colleges have recognized the inadequacy of high school units as a measure of achievement and administer college board examinations as a basis for setting minimum admissions standards in order to maintain their established levels of quality. Yet no group of colleges has taken a similar step to establish minimum achievement standards for graduation. The critics of higher education might question whether this means that colleges in general are more careful about admissions standards than about graduation standards, or whether they are more willing to agree upon objective measurement of learning done elsewhere than on measurement of achievement on their own campuses and as a result of their own practices in dealing with students.

Through the years, the great stumbling block to revision of the credit system as a tool for recording and reporting student accomplishment has been the need for measures which are interchangeable among the many institutions of higher education and meaningful to those who must judge the student's ability on the basis of his college record. The current enrollment pressure of students with varied academic backgrounds and the social pressure

for well educated men and women challenge higher education to improve the system of recording and reporting student progress or to develop a new and better one. If institutions do not cooperatively meet this challenge, other agencies or organizations will expand the use of their own measures of competence at the thresholds of graduate study or careers.

Before there can be enthusiasm for the new meaning which such programs as independent study and credit by examination have brought into the credit system, before there can be interinstitutional cooperation in seeking to improve the credit system, there must be information sufficient to bring about understanding and mutual confidence. The extent to which this information can be cooperatively derived and discussed will have an important bearing on which direction institutional action will take. Since the accrediting agencies, by their very nature, are in a position to inspire and act as focal points for cooperative study by institutions with similar objectives, it would seem that they may have a responsibility for leadership unless institutions find some other organizational structure for their cooperative action. Certainly, in the interests of interinstitutional communication and mutual benefits to be gained, colleges and universities need to find an acceptable organizational structure through which to reach agreement on the development and use of tests, equivalence units, and other elements related to student accomplishment.

A Look Ahead

Institutions which have liberalized their use of the credit hour report that, once there is general recognition that achievement can be measured effectively by something other than class time, the teaching process may be approached with improved methods and the evaluation process with new insights. Certainly, the advances made in various forms of testing in recent years warrant objective consideration of testing as a supplement to the familiar credit system. The trend toward the use of credit by examination is positive evidence of growing confidence in such measures within many institutions.

This bulletin does not review the literature of recent or current research on advances made in adjusting the credit system to meet the needs of the four dimensions of higher education — the students, the program, the staff, and the physical facilities. Indeed, it would be difficult to find among the recent scattered research in this area anything to compare in depth and scope with the Learned and

Wood study, *The Student and his Knowledge*, reported in 1938, or the Eight-Year Study reported only a few years later. Nevertheless, some research has been done and there is need for a great deal more, as institutions and their faculties go about the critical reappraisal and cooperative improvement of the credit system.

In reappraising the credit systems of their own institutions, educators might well ask themselves these questions:

How is the credit system related to the student's attitude toward higher education, the program he selects, the objectives he seeks, the attitudes and habits he develops in the process of attaining the goals he sets for himself in higher education and in life?

How does the credit system affect the types of curricular programs a college offers, the objectives it stresses, the standards it maintains, the kinds of learning experiences it provides?

How does the credit system affect the distribution of staff time, the utilization of teaching talent and modern techniques, the objectives which faculty members establish for their own efforts, and their attitudes toward student objectives?

How does the credit system affect the use and adequacy of physical facilities, the selection of new facilities, the acceptance of improved technology in instructional materials?

Finding the answers to these questions may be an important step, not only toward developing an improved system for recording and communicating information about student progress, but also toward improving the very processes by which students become educated.

Appendix

Examples of Institutional Practices in Granting Credit by Examination

It is not the purpose of this report to evaluate the credit systems of the institutions represented in the illustrations given below. In fact, the information in the examples is confined to that portion of each institution's credit system which seems to be concerned with credit based primarily or entirely on examination rather than on class attendance.

Most of the institutions used to illustrate examination credit practices in this report would not be considered highly experimental in their philosophies. For the most part, their programs have not been described in other numbers of the *New Dimensions* series. On the whole the illustrations were selected to give some indication of the pattern and range of modifications in a strictly class-time credit system.

Brooklyn College.—One of the programs which provides most flexibility for acquiring academic credit for experiences outside the classroom is the special baccalaureate degree program for adults at Brooklyn College. Started in 1954, with funds made available by the Center for the Study of Liberal Education for Adults, this experimental program seeks to equate life experience with academic education and "to enable a select group of adults eventually to achieve the baccalaureate degree on the basis of ability and demonstrated achievement rather than the mere accumulation of college credits."[1] The program may have special implications for revision of the credit system because, although it operates within the framework of the traditional credit system, it utilizes some new methods of determining what students need to accomplish in order to qualify for bachelor's degrees and helps them complete balanced programs by means of college work which fills the gaps in their basic experience.

To make available the means of broadening learning to give a balanced program, each adult student is directed into a program of studies which may include special tutorial services, independent

[1] *Brooklyn College Bulletin*, 1960–62, Volume XXX, No. 1, Brooklyn, N. Y., April 15, 1960, p. 49.

study, exemption examinations, classroom or seminar attendance, and a formal thesis or comprehensive examinations. The student's progress is evaluated and translated into equivalent college credits.

According to a news release from the office of the associate director,[2] adults with a liberal background of life experience may complete the equivalent of all the prescribed general education courses in the form of four tutorial seminars, with exemption available in parts of these seminars on the basis of examinations. Two methods, other than class attendance, are available for meeting the remaining requirements, which are the same for adults as for other undergraduates. One of these is credit for specific elective courses in which examinations reveal that individual adults have mastered both content and objectives through experience. The other is individual tutorial service provided in those cases where adults have not entirely mastered the content and objectives but have learned enough to justify acceleration.

The exemption examinations program, which is open to all undergraduates, not merely to adults, is described in the *Brooklyn College Bulletin* as follows:

> The privilege of exemption from any course, except the freshman sequence courses and the physical activities courses, on the basis of independent study and special examinations is available to all qualified fully matriculated students in the College of Liberal Arts and Sciences and in the School of General Studies. Exemption may be granted with or without college credit, depending upon the student's rating in the examination. Students will be allowed a maximum of 9 credits in prescribed courses. There is no limitation on the number of credits which a student may earn in elective courses. . . .
>
> Exemption from some courses in the Division of Vocational Studies may be granted on the basis of previous experience in the field or on the basis of an examination. If a student, matriculating in a program in which accounting, business mathematics, police science, stenography, or typewriting is required, already possesses the pertinent knowledge and skills, he may apply for exemption from certain required courses in these fields. . . .[3]

University of Buffalo.—One of the earliest institutions with an organized program to allow degree credit on the basis of examinations was the University of Buffalo, whose anticipatory examina-

[2] Brooklyn College, "The Plan of the Special Baccalaureate Degree Program for Adults," undated but received from Brooklyn College, May 1960, (mimeographed), 2pp. Reports on experiences with this program, which have previously been published by the Center for the Study of Liberal Education for Adults, 940 E. 58th Street, Chicago 37, Ill., include: Bernard H. Stern, *How Much Does Adult Experience Count*, 1955, 23 pp., and *Adults Grow in Brooklyn*, July 1955, 51 pp. A third monograph on the program is currently scheduled for release by the Center.

[3] *Brooklyn College Bulletin, op. cit.*, p. 79.

tions date from 1932.[4] Credit parallels that in regular courses. By 1956, 1,700 students had taken more than 4,000 credit examinations to accelerate their work. The University reports that, for the able student, such examinations save time, money, and energy, permit him to find his academic and intellectual level, keep him alert, and help him master academic data on his own; for the college, they attract superior students, encourage the faculty to become critical of their course content as they write syllabi for examination candidates; for society at large, they salvage able young people for higher education who might otherwise forego college because they lack the funds to attend for 4 years, and bring superior students into graduate work or economic productivity and leadership sooner.[5]

A recent catalog from the University of Buffalo states the institution's policy on examination credit as follows:

> High school and college students of superior ability may reduce the time and expense required to earn a college degree by taking college credit examinations and thus secure college credit for courses studied independently or for high school units beyond the minimum required for admission. Students wishing to take these examinations may obtain explanatory leaflets and application blanks from the Director of Student Counseling Services. . . . The college credit examination is comparable to the regular examination given at the end of a college course. If the student receives a passing grade in the examination and wishes to accept it, college credit will be granted.[6]

University of Chicago.—The University of Chicago has long had a program in which the primary measures of student competence have been in terms other than semester hour credits, although course units are used as subsidiary measures. The University uses placement tests to assess a student's competence when he enters and comprehensive examinations to assess his competence following periods of instruction, with advisory grades in general courses along the way.

Early in the administration of Robert Maynard Hutchins, who became fifth President of the University on July 1, 1929, the present organization of the University was developed and the basic

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[4] Mazie E. Wagner, *Anticipatory Examinations for College Credit: Twenty Years Experience at the University of Buffalo*, The University of Buffalo Studies, Volume 20, Number 3, December 1952, pp. 107–133, summarizes experiences in, and research on, this program. See also Edward S. Jones and Gloria K. Ortner, *College Credit by Examination*, An Evaluation of the University of Buffalo Program, The University of Buffalo Studies, Volume 21, Number 3, January 1954, pp. 127–201.

[5] W. Leslie Barnette, Jr., "Advanced Credit for the Superior High-School Student, a Brief Report of College Credit Examinations at the University of Buffalo," *The Journal of Higher Education*, 28: 15–20, January 1957.

[6] *The University of Buffalo Bulletin*, 1958–60, General Catalog, Vol. XLVI, No. 14, Buffalo, N. Y., Nov. 15, 1958, pp. 28–29.

elements of the College, particularly its emphasis on general education, placement tests, examinations administered independently of the instructors, an autonomous faculty, and early admission, were introduced. Through the years, the size of the institution has done more than make the formulation of definite policies necessary; it has made research possible.[7] The changes which have been made at Chicago in recent years are evidence of continuous refinement of policies.

Placement tests are considered especially important measures in providing flexibility for the entering student; they also serve as a basis for determining what the student needs to study in order to complete a balanced program of general education and concentration. A recent bulletin of the University describes the function of the placement tests as follows:

> Placement tests are used to measure the extent of an admitted student's previous preparation for College courses. On the basis of these tests, the comprehensive examinations that he must pass later in order to qualify for the Bachelor's degree are specified. A student is not required to pass comprehensive examinations or to take courses in those fields or parts of fields in which he already has sufficient competence. He is required to pass comprehensive examinations in those subjects required for a particular degree in which his competence at the time he enters the College is below that needed. A program of courses is drawn up to prepare him for these examinations. This use of the placement tests eliminates the repetition of subjects that the student has already mastered and, at the same time, reduces the possibility that he might begin his program with courses for which he would not be adequately prepared.[8]

The Chicago College plan requires the student to show competence in a balanced program consisting of an organized curriculum in general education and concentration in a specific field of study. In the program of general studies, all students are required to have competence in the following eight areas: biological sciences, physical sciences, humanities, social sciences, English composition, foreign language, mathematics, and history of western civilization. This competence may be demonstrated by performance either in placement tests taken when the student enters the College or in examinations taken after instruction in the field. Advanced standing is determined on the basis of student performance on the College's own placement examinations or by scores on the Ad-

[7] See, for example, *The Chicago College Plan*, by Samuel Boucher (1935, 344 pp.) and the edition revised and enlarged after 10 years' operation of the plan, by A. J. Brumbaugh (1940, 143 pp.), The University of Chicago Press, Chicago; also *The Idea and Practice of General Education: An Account of the College of the University of Chicago by Present and Former Members of the Faculty*, The University of Chicago Press, Chicago, 1950, 333 pp.

[8] The University of Chicago, *Announcements—Undergraduate Programs, 1959–60*, Volume LIX, Number 1, Oct. 3, 1958, p. 53.

vanced Placement Examinations of the College Entrance Examination Board. For those students not permitted to accelerate as a result of placement tests, the maximum requirement in general studies is 24 quarter course units (2 years). In any of these eight general studies areas, students with superior preparation may be excused from part or all of the course work on the basis of superior placement test performance. It is even possible for a student to demonstrate, by means of placement tests, that he already has the knowledge and competence expected of a student who has completed the full 2-year requirement in general studies.[9]

Just as placement tests are used to assess a student's competence in general studies when he enters the College, so comprehensive examinations are employed to measure the quality of a student's performance in an area of general studies following a period of instruction. These examinations are described by the University as follows:

> The teaching staff in each area is responsible for formulating examinations, but when staff members read and evaluate the examination papers, they do so without knowing the identity of the individual students who wrote the papers. Since examinations given at the end of a two-quarter or three-quarter span of instruction are comprehensive of all the work done up to that point, they require students to seek and to understand the organizing principles in a considerable body of material. Consequently, the system of examinations makes possible two distinct educational advantages. Because the examinations cover a lengthy period of instruction, fragmentation in the learning process is minimized. Because the student's official grade is based upon examination papers that are read without knowledge of his identity, these examinations afford an unusually objective evaluation of student performance.[10]

Advisory grades, used to report the quantity and quality of a student's preparation in general courses, are A, B, C, D, I, and F. However,

> Advisory marks are not entered on a student's permanent record; they are regarded as reports to indicate for the student and his advisor the extent to which the student is successfully preparing for the comprehensive examination by which a final grade will be determined. The evidence on which advisory marks are based is found in the written exercises and tests prescribed and announced for each course early in the quarter.[11]

Grades used in evaluating a student's performance on a comprehensive examination are A, B, C, D, and F. The policy with regard to these grades is stated as follows:

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[9] The University of Chicago, *College Announcements, 1961–62*, Volume LXI, Number 1, 1960, pp. 36–38.

[10] *Ibid.*, pp. 38–39.

[11] *Ibid.*, p. 168.

> Grades reported on comprehensive examinations are entered on the student's permanent record. No grade is reported if a student fails to take an examination for which he is registered, but the absence is permanently recorded unless the student cancels the registration within the specified time limits. Comprehensive examinations may be retaken. Although each grade received on the examination in a particular field is entered on the record, only the highest grade reported is considered to be the official grade.[12]

In general, then, the final measures of the student's achievement in general studies are examinations, which are graded without reference to the student's performance in class discussions. Placement tests, which indicate the level of precollege accomplishment, are used to create a sensitive and flexible system to insure that each student undertakes a program appropriate for his own needs in meeting the standards imposed by the examinations. Advisory marks, or course credits and grades, are used to indicate the quantity and quality of student progress toward competence in examination areas and may be used for transferring credit to other institutions.

Completion of the program of general studies (roughly half of the undergraduate requirements) is based upon successful performance on comprehensive examinations in eight areas of general education. The other half of the student's undergraduate program is divided approximately equally between studies in the specific field of concentration and other work determined by individual needs and interests. Requirements in fields of concentration are established by the specialized staffs of each field.

A student who wishes to pursue a special line of inquiry which does not correspond to any one field of academic specialization may do so through a program of tutorial studies approved by the Council on Advanced General Studies. In working with a high degree of freedom, on a subject largely determined by his own special interests, the student faces a corresponding challenge to his initiative and responsibility. The individualized tutorial portion of the student's program requires a year's work and may be divided between the last 2 years in the College or concentrated in the last year, depending upon the nature of the interest and the stage at which it becomes fully defined. In any case, the major part of the student's time in his last year is devoted to independent work supervised by his tutor. At the conclusion of his studies, a tutorial candidate must submit a satisfactory bachelor's essay and pass a comprehensive examination that is set for him by the Council on Advanced Tutorial Studies.[13]

[12] *Ibid.*, p. 169.
[13] *Ibid.*, p. 42.

University of Illinois.—Besides cooperating in the national Advanced Placement Program of the College Entrance Examination Board and granting credits for educational experience in the armed services according to the guide published by the American Council on Education, the University of Illinois has a rather extensive program of "proficiency" examinations for credit. These proficiency examinations, which are similar to regular course examinations, are given each semester in courses normally open to freshmen and sophomores. Except in Rhetoric 101 and 102, the student must obtain the consent of the head of the department concerned. In more advanced undergraduate subjects, proficiency examinations are given on recommendation of the head of the department and approval of the dean of the college.

Entering freshmen who are well prepared and who have not already obtained credit by way of the national Advanced Placement Program, are encouraged to take proficiency examinations, especially in courses required for freshmen and sophomores.

The 1960-61 bulletin of the University gives further information as follows:

> No fee is charged for these examinations. A student who passes a proficiency examination is given credit toward graduation, provided that this does not duplicate credit counted for his admission to the University and that the course is acceptable in his curriculum. The grade in the proficiency examination is "pass" or "not pass," but no student is given a grade of "pass" unless he has made at least "C" in the examination. No official record is made of failures in these examinations, and grades received on proficiency examinations are not considered in computing averages.
>
> Proficiency examinations are given under the following restrictions: (1) They may be taken only by persons who are in residence or are registered in a correspondence course, or who are candidates for degrees and need no more than ten semester hours to complete the requirements for their degrees; (2) They may not be taken by students who have received credit for more than one semester of work in the subject in advance of the course in which the examination is requested; (3) They may not be taken to raise grades or to remove failures in courses.[14]

University of Louisville.—As early as June 1933, the University of Louisville bulletin outlined the institution's policy regarding achievement as the primary measure of student progress and noted that the faculty was "working to minimize the defects of the course-credit-examinations system." The 1959-60 bulletin lists four types of Extramural Study by which the able student may receive credit for work which he carries on independently. Under this plan, "emphasis is put on the *actual achievement* rather than on

[14] *University of Illinois Bulletin*, Volume 57, Number 79, Undergraduate Study, 1960-61, Urbana, Ill., July 1960, p. 37.

time served."[15] Credit earned by conference work, by extramural examination, or through independent study during the regular session is counted in the student's regular load, which must not exceed 17 hours. Other regulations governing credit for extramural study are given as follows:

> Conference Work: An instructor may excuse a superior student from regular class attendance. The student must be regularly enrolled for the course and must take all of the regularly scheduled examinations and the final examination. The student must pay the same fees. He will receive the same credit as if he attended the class regularly.
>
> Extramural Examination: A student may apply for an extramural examination on any course which is listed in the catalogue. . . . He must make application for the examination through the Dean's Office and have a chairman appointed from the faculty to supervise his examination. He must present himself for both written and oral examinations, and must submit any other evidence of his achievement which the chairman may require. He must pay fees amounting to one-half the regular fees for the course, and he must be registered for other regular credit courses.
>
> The purpose of an extramural examination is to give the student credit for work in a field in which he is already proficient.
>
> Independent Study: Superior students may with permission of the Dean register for independent study in a particular department. The student must have a general average of 2.0, an average of 2.5 in the department, and at least 18 semester hours credit in that department. Independent study work consists of a minor research project conducted under the direction of a faculty member. At the close of the study the student must present himself for oral examination and for written examination if the examining committee so desires. Application blanks for independent study are secured at the office of the head of the department.
>
> Intersession Credit: In order to assist special students, intersession credit is given for work taken between the end of the Summer Session and the beginning of the Fall Semester. A student may pursue any regular course under the tutelage of the faculty member who regularly teaches that course. He may earn no more credit than there are weeks between the end of the Summer Session and the beginning of his next enrollment in the University, whether it is in the College or in one of the other schools. He must pay for his work at the regular rate for part-time, residence credit. He must present himself for examinations, both oral and written, at the close of the course, and must complete the course entirely by the end of the first week of the next session for which he may be enrolled in the University.[16]

University of Minnesota.—The University of Minnesota distinguishes between examinations for credit and examinations to demonstrate proficiency in prerequisite courses as follows:

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[15] *Bulletin of the University of Louisville*, College of Arts and Sciences, 1959–60, Vol. LIII, No. 1, July 1959, Louisville, Ky., p. 41.

[16] *Ibid.*, p. 41.

Examination for Credit: Credit for material mastered outside of class (exclusive of high school work) may be obtained by special examination. A student who believes that he is as well informed in a particular subject as the students successfully completing the course should apply to the Scholastic Committee for a special examination. If the application is approved, the committee will appoint a special faculty committee to administer the examination. The fee for such examination is $5. Usually no grade is assigned.

Examinations to Demonstrate Proficiency in Prerequisite Courses: If a student wishes to carry a course for which he does not have the prerequisite he may apply to the Scholastic Committee for permission to take an examination to demonstrate his proficiency in the prerequisite. A satisfactory showing in the examination will admit the student to the course but will not entitle him to credit in the prerequisite course. There is no fee for this examination.[17]

University of New Mexico.—The bulletin of the University of New Mexico states concisely the institution's policies with regard to examination credit by Advanced Placement Examinations and other tests and to validation of USAFI courses.

A resident student has the privilege of receiving undergraduate credit from passing a special examination without attendance upon the course, subject to the following restrictions: (1) he must not have been previously registered in the course; (2) he must have a scholarship index of 2.0 or more in a normal program of studies and be doing superior work at the time of taking the examination; (3) the examination must have the approval of the dean or director of the college, the chairman of the department, and the instructor concerned; (4) the applicant must obtain from the dean or director of his college a permit for the examination and pay in advance the required fee; (5) the student must obtain in the examination a grade not lower than C and show a mastery of the course acceptable to an examining committee; and (6) credits earned do not apply to residence requirements.[18]

The University participates in the CEEB's Advanced Placement Program and grants credit upon recommendation of the academic departments concerned for Advanced Placement Examinations completed with grades of 3, 4, or 5.[19]

At the University of New Mexico, credit for service training and experience is granted in conformity with the procedures recom-

[17] *Bulletin of the University of Minnesota*, College of Science, Literature, and the Arts, 1959–61, Vol. LXII, Number 13, July 1, 1959, Minneapolis, Minn., p. 22.

[18] *The University of New Mexico Bulletin*, 68th Catalog Issue, 1959–60, Volume 72, No. 6, Albuquerque, N. M., May 1959, p. 95.

[19] These are the three highest scores on a 5-point scale; see Shirley Radcliffe, "Advanced Standing," *op. cit.*

mended by the North Central Association and the American Council on Education. Because not all catalogs are explicit in stating what these procedures are, the policies of the University of New Mexico are reported here in considerable detail:

> Total semester hours of military credit to be accepted in a specific degree program will be at the discretion of the degree-granting college of this University in which the student is registered. A maximum of 8 semester hours elective credit is allowed for basic or recruit training apportioned as follows: First Aid, 2 semester hours; Hygiene, 2 semester hours; Physical Education Activity, 4 semester hours. . . . Credit earned in specialized army and navy programs conducted by college and university staffs is allowed in accordance with the recommendations of the administering institution. Credit for work done in formal training programs is allowed in accordance with the recommendations of the American Council on Education or on the basis of examinations here. U. S. Armed Forces Institute courses are acceptable if courses have been taken through university extension divisions accredited by the National University Extension Association. Other USAFI courses may be accepted if recommended by the American Council on Education and validated by successful scores on "End-of-Course Tests." U.S. Armed Forces Institute correspondence courses not directly transferable or validated by "End-of-Course Tests" may be established by examination at this University. The veteran has the opportunity to demonstrate his competence in any University subject, and to establish credit in that subject, by passing an examination as required by the Committee on Entrance and Credits.[20]

Ohio State University.—At Ohio State University, students may receive credit by examination (Em credit) for superior performance on regular placement tests in English, mathematics, foreign language, health education, and typing and shorthand. They may also receive Em credit for creditable performance on proficiency tests designed to measure exceptionally good preparation in high school or independent study outside of class. The 1960 *College of Arts and Sciences Bulletin* states that:

> The department or school in which the course is being taught has full authority for permitting a proficiency test and for establishing the level of performance to be attained. If the student is successful in attaining this established level, the department chairman may recommend Examination (Em) credit for the course covered by the proficiency test. The Executive Committee of the College of Arts and Sciences has ruled that a student may not obtain Em credit for a course which is prerequisite to one in which he has earned college credit.[21]

The bulletin further explains the use of Em in the marking and quality point system:

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[20] *Ibid.*, p. 59.

[21] Ohio State University, *College of Arts and Sciences Bulletin*, Vol. LXIV, No. 15, Columbus, Ohio, April 1, 1960, p. 8.

> Section 1. This mark indicates credit given to students registered in the University on the basis of examinations taken prior to or after admission to the University. The level of achievement which must be demonstrated by the student on these examinations in order to receive Em credit shall be determined by the Department or School in which the course for which credit is being given is taught. This credit, up to a maximum of thirty quarter hours, shall be assigned only upon the authorization of the Chairman of such Department or the Director of such School and with the approval of the Executive Committee of the College in which the student is registered. An additional fifteen examination quarter credit hours may be assigned in the same manner but only with the approval of the Faculty Council.
>
> Section 2. Examination credit shall not be given to a student for a course in which he has received a mark at this University. No [quality] credit points are allowed for courses in which a mark of Em is given.[22]

University of Oklahoma.—Not only does the University of Oklahoma give credit for military experience according to recommendations of the American Council on Education and grant credit by examination for other measured student competence;[23] it also seeks to weed out credit for class work taken so long ago that it may no longer be relevant to the student's program. For example, the University bulletin for 1959–60 notes that:

> Effective September 1, 1959, credit in the student's major field or area of concentration which is more than ten years old may not be applied toward a bachelor's degree unless it is validated by the major department, or by the departments in the student's major area of concentration. The term "area of concentration" is included in addition to "major field" to allow for those cases in which the equivalent of a major may be earned by a combination of work in several departments, as in the Letters program.[24]

Credit for highly specialized or technical work is usually determined in consultation with the chairman of the department concerned.

Sarah Lawrence College.—Sarah Lawrence College is one of those few institutions which have sought to develop quality education while abandoning the traditional program of courses and credit hours. The relatively small enrollment simplifies the problem of getting to know well the individual students and their abilities and needs. The following excerpts from the institution's 1959–60 catalog describe how their program works:

> Among the innovations introduced at Sarah Lawrence have been the elimination of required courses in favor of a curriculum planned individually for each student; a system of faculty reports to students in place of the con-

[22] *Ibid.*, p. 21.

[23] *Bulletin of the University of Oklahoma*, Catalog Issue, New Series No. 1272, Norman, Okla., June 15, 1959, pp. 24–25.

[24] *Ibid.*, p. 23.

ventional grading system; small classes, discussion groups, seminars, and tutorial conferences in place of the lecture system; the inclusion of the creative arts—painting, sculpture, design, theatre, dance, music, writing—as integral parts of the academic curriculum; the combination of practical field work with academic study in politics, economics, psychology, and the social sciences; the establishment of a complete system of student self-government for student affairs; the inclusion of a program of teacher preparation, with practical experience in teaching, as a part of the liberal arts curriculum.[25]

The system used to provide balanced programs is described thus:

Since there is no system of required courses and since students are not required to have a major in a particular field, it is necessary not only to plan the programs for a single year carefully, but to see that the sequence of studies taken from year to year is an intelligent one. For some students a typical four-year program shows an increasing specialization; for others who may have begun with highly specialized interests the process of education is one of broadening these interests and of finding new, and sometimes more important, ones; for still others a program shows fairly even division of emphasis, perhaps between two fields. There are many appropriate kinds of programs; the important problem is to find out which kind is best for each student and to plan it to insure the maximum growth.[26]

The following description shows how evaluation and reporting are accomplished:

One of the tasks of any college is to discover a real measure of student achievement. Sarah Lawrence College seeks to evaluate the education of individual students in terms of the standards of the College. . . . Such an evaluation cannot be made in terms of conventional grades, numbers, or letters. An attempt is therefore made to describe the growth and achievement of students, in reports written by faculty and sent to the students twice a year. In these statements faculty members report their judgment of the student's academic achievement; of attitude toward work; of study habits; of ability, not only to learn something but to form judgments and to use what is learned; of ability to work independently—indeed, of all the factors that seem significant to faculty as indication of the student's intellectual and personal maturity.

Final responsibility for decisions affecting a student's continuance in college, classification and qualification for the degree, rests with the Faculty Committee on Student Work. This Committee meets weekly; it regularly reviews work of all students and discusses any questions about any student's work which teachers or dons may wish to bring before it. Its judgments are based on faculty reports, reports by dons, and conferences with dons and teachers.[27]

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[25] *Sarah Lawrence College Catalogue*, 1959–60, Bronxville, N. Y., August 1959, pp. 5–6.
[26] *Ibid.*, p. 12.
[27] *Ibid.*, pp. 14–15.

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